To: Williams, Ronald[Williams.Ronald@epa.gov]

Cc: Fortmann, Roy[Fortmann.Roy@epa.gov]; Whitaker, Donald[Whitaker.Donald@epa.gov];

Thomas, Kent[thomas.kent@epa.gov]

From: Egeghy, Peter

**Sent:** Thur 6/11/2015 7:10:12 PM

Subject: RE: Indoor Air VOCs

oswer-vapor-intrusion-background-Report-062411.pdf

<u>Lin Egeghy Rapp 07-056.pdf</u>
<u>Heavner VOC Homes 1995.pdf</u>
wallace the los angeles team study.pdf

Hi Roy,

A good resource that includes chloroform and 1,2-dichloroethane is OSWER's "Background Indoor Air Concentrations of Volatile Organic Compounds in North American Residences (1990–2005): A Compilation of Statistics for Assessing Vapor Intrusion" (attached).

NHANES also measured those two compounds in a special study looking at personal air back in 1999-2000, and results can be found in Lin et al. (attached).

As for ancient history, Wallace measured chloroform and 1,2-dichloroethane in the TEAM study and Heavner measured 1,2-dichloroethane and 1,4-dichlorobenzene in indoor air.

Thanks,

Peter

From: Williams, Ronald

Sent: Wednesday, June 10, 2015 4:25 PM

To: Fortmann, Roy; Whitaker, Donald; Thomas, Kent; Egeghy, Peter

Subject: RE: Indoor Air VOCs

Hi Roy

We do have thousands of indoor VOC measures from the DEARS. If you wish to site published data, the attachment represents that type of data as based upon personal monitoring. We also discuss sources in that article. Sarah's article also touched upon sources (outdoor). I have some tables in my files showing comparisons of indoor/outdoor/ambient for the VOCs in question and will try to pull those tomorrow.

Ron

From: Fortmann, Roy

Sent: Wednesday, June 10, 2015 3:37 PM

To: Williams, Ronald; Whitaker, Donald; Thomas, Kent; Egeghy, Peter

Subject: Indoor Air VOCs

I have been asked to look at some indoor air VOC data from residences that were monitored near Superfund sites. This is a request from the ORD Technical Support Center. A few homes have elevated 1,2-dichloroethane, 1,4-dichlorobenzene, and chloroform. They are asking what are "typical" concentrations of these three VOCs and what are the potential sources. The very high levels of 1,4-dichlorobenzene in the bedrooms of a couple of homes suggest mothballs. I haven't fully analyzed the 1,2-DCA or chloroform data.

Are you aware of any recent publications on VOC levels in residences? What is the best information on potential sources of these VOCs in residences? I don't want you to do any digging or spend much time on this. But, if you are aware of easilyaccessible sources of information, let me know. Thanks, Roy Fortmann, Ph.D. Deputy Director Human Exposure and Atmospheric Sciences Division National Exposure Research Laboratory Office of Research and Development U.S. Environmental Protection Agency Research Triangle Park, NC 27711 (919)541-1021 Fortmann.roy@epa.gov